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Revision of Afrotropical species of the *Philonthus quisquiliarius* species group (Coleoptera: Staphylinidae: Philonthina)

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Abstract. The *Philonthus quisquiliarius* species group of the genus *Philonthus* Stephens, 1829, is defined, currently comprising 9 species. Two species are described as new: *Philonthus osteolaemus* sp. nov. (Republic of South Africa) and *P. pantodon* sp. nov. (Sudan). Remaining seven species are redescribed: *P. alterius* Cameron, 1951, *P. debiliformis* Cameron, 1951, *P. flavoscutellatus* Bernhauer, 1928, *P. lepineyi* Scheerpeltz, 1934, *P. mateui* Lavasseur, 1962, *P. ovithorax* Bernhauer et Schubert, 1914, *P. quisquiliarius* Gyllenhal, 1810. *Philonthus lacustris* Bernhauer, 1915 and *P. quisquiliaroides* Scheerpeltz, 1974 are synonymized with *P. ovithorax* Bernhauer et Schubert, 1914 and *P. chopardi* Cameron, 1950 and *P. peregrinoides* Scheerpeltz, 1974 are synonymized with *P. quisquiliarius* (Gyllenhal, 1810). All species of the *P. quisquiliarius* group are keyed; the aedeagi and relevant morphological characters of all species are figured.

INTRODUCTION

The genus *Philonthus* Stephens, 1829 is represented in Afrotropical Region by approximately 330 known species divided in six species groups defined by Tottenham (1962) and two species groups by Hromádka (2008, 2009). The present study follows these previous studies by providing the revision of the species belonging to the *P. quisquiliarius* new species group. The group is characterized as follows: body small 4.5-7.8 mm long. Shape of head from rounded to squarish, always black, eyes flat, differently long. Antennae black and long, mostly reaching posterior fourth of pronotum when reclined, or exceeding posterior margin of pronotum by the length of antennomeres 10-11. Pronotum brown-red to black, differently shaped, as long as wide to longer than wide, lateral margins parallel-sided or slightly converging anteriad, each dorsal row with 5 mostly equidistant punctures, each sublateral row with 2 punctures. Elytra brown, black-brown or black-blue, punctation coarse and mostly dense. Legs yellow-brown to black, protarsomeres 1-3 of males dilated and sub-bilobed, weakly dilated in females. Abdomen dark brown to black, first three visible tergites with two basal lines. Aedeagus simple, apex of median lobe sharply pointed or rounded, apex of paramere with several setae.

The following nine Afrotropical species are included in the group:

Philonthus alterius Cameron, 1951,

Ethiopia, Angola, Kenya, Liberia, Mascarene Islands, Republic of South Africa, Senegal, Sudan, Zambia









Philonthus debiliformis Cameron, 1951, Kenya, Gambia, Senegal, Sierra Leone, Sudan,

Tanzania

Philonthus flavoscutellatus Bernhauer, 1928, Democratic Republic of the Congo

Philonthus lepineyi Scheerpeltz, 1934, Sudan Philonthus mateui Levasseur, 1961, Mauretania

Philonthus osteolaemus sp. nov., Republic of South Africa

Philonthus ovithorax Bernhauer et Schubert, 1914,

Ethiopia, Kenya, Madagascar, Uganda

Philonthus pantodon sp. nov., Sudan

Philonthus quisquiliarius Gyllenhal, 1810, Botswana, Madagascar, Malawi, Namibia,

Republic of South Africa, Senegal, Afganistan, Algheria, Azores, Caucasus, China, Egypt, Mongolia, Morocoo, Nepal, Russia, Syria,

Turkey, Uzbekistan

MATERIAL AND METHODS

The following acronyms are used to refer to the collections mentioned:

BMNH British Museum Natural History, London, United Kingdom (Maxwell Barclay);

FMNH Field Museum of Natural History, Chicago, USA (James Boone);

IRSB Institut royal des science naturelles de Belgique, Bruxelles, Belgium (Didier Drugmand);

LHPC Lubomír Hromádka, private collection, Praha, Czech Republic;

MNHP Muséum national d'Histoire naturelle, Paris, France (Thierry Deuve, Azedah Taghavian);

MNUB Museum für Naturkunde der Humboldt-Universität, Berlin, Germany (Manfred Uhlig);

MRAT Musée Royal d'Afrique centrale, Tervuren, Belgium (Marc de Meyer);

MZLU Museum of Zoology, Lund University, Lund, Sweden (Roy Danielsson);

MZSF Museo Zoologico de la specola Firenze, Firenze, Italy (Arnaldo Bordoni);

NHMW Naturhistorisches Museum, Wien, Austria (Harald Schillhammer);

NMPC National Museum of Praha, Czech Republic (Jiří Hájek);

NMUK Manchester Museum, Manchester, United Kingdom (Dmitri Logunov);

ZMHB Museum für Naturkunde der Humboldt-Universität, Berlin, Germany (Manfred Uhlig).

A double slash (//) is used to divide separate labels of type specimens. All measurements were taken in beetles with a stretched abdomen. All ratios mentioned in the descriptions are dimensionless but can be converted to lengths as 20 units = 1 mm. When indicating the relative length of antennal and tarsal segments, equal lengths of subsequent segments are abbreviated (e.g., 2-4=5 means that each of segments 2, 3 and 4 is of the same length of 5 units).

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RESULTS

Philonthus alterius Cameron, 1951 (Figs 1-5)

Philonthus alterius Cameron 1951: 402. Philonthus daunus Tottenham, 1953: 147. Synonymized by Tottenham, 1962: 195.

Type locality. Abyssinia, southwest from Omo Halley.

Type material examined. Holotype (♂): 'ABYSSINIA, southwest Omo Halley, i.1942, T.H.E. Jackson, Pres by Com Indy. Ent. B.M. 1952-575. // TYPE *Philonthus alterius* Cameron [white oblong label handwritten]' (BMNH).

Material examined. ANGOLA, Joäo de Almmeida, 29.iii.1972, Southern African Exp., B.M. 1972-1, 2 spec., (BMNH); KENYA: 19 spec., Arabuko Sokoke forest (30 km S di Malindi) 8.-24.vi.1998, L. Bartolozzi & A. Sforzi legit. (num. Mag. 2161) alla luce, (MZSF); LIBERIA Mt. Nimba Grassfield, 16.-25.ix.1979, I. Manski, B.M. 198-85, 1 spec., (BMNH); REPUBLIC OF SOUTH AFRICA, Harteheestport, 26.xii.1971, Southern African Exp., B.M. 1972-1, 2 spec., (BMNH); E. Transvaal 15 km Klaserie, Guernsey farm, 18.-30.xii.1985, Woodland, S.+J. Peck, P#85-31b, evening carnetting 5 spec., (FMNH); E. Transvaal Krater Park, Skukuza, 12.-14.xii.1985, thorn srub forest, S.+ J. Peck, P#85-279, evening carnetting 2 spec., (FMNH); ZAMBIA, South Luangwa NP., Mfuwe Crocodile farm 450 m, lux, 27 spec., M. Uhlig leg., (LHPC, ZMHB).

Redescription. Body length 5.4-5.7 mm, length of fore body 2.6-2.9 mm.

Colouration. Body black, maxillary and labial palpi, mandibles and antennomere 1 brown-yellow, remaining antennomeres black-brown, legs yellow-brown.

Head rounded, wider than long (ratio 17.5:15), very slightly narrowing towards neck. Posterior angles rounded, bearing one black bristle. Eyes very slightly projecting, relatively large, longer than temples (ratio 7:5.5). Four punctures between eyes along straight line, distance between medial interocular punctures three times as large as distance between medial and lateral interocular puncture. Temples area with many punctures of variable size. Surface without microsculpture.

Antennae reaching posterior margin of pronotum when reclined, all antennomeres longer than wide. Relative length of antennomeres: 1 = 6; 2 = 4; 3 = 3.5; 4 = 3; 5-10 = 2.5; 11 = 4.5

Pronotum longer than wide (ratio 22:18), parallel-sided. Anterior angles obtusely rounded, posterior angles markedly rounded. Each dorsal row with 5 coarse equidistant punctures, each sublateral row with 2 fine punctures, puncture 2 slightly shifted to the lateral margin. Surface without microsculpture.

Entire scutellum finely and densely punctate, punctures as large as eye-facets, separated by distance smaller than diameter of punctures.

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Elytra combined slightly longer than wide, vaguely widened posteriad. Punctation coarse and dense, punctures as large as those on scutellum, separated by one puncture diameter in transverse direction. Surface without microsculpture; setation grey.

Legs. Metatibia longer than metatarsus (ratio 14:12.5). Metatarsomere 1 conspicuously longer than metatarsomere 5. Relative length of metatarsomeres: 1 = 4; 2 = 2; 3-4 = 1.5; 5 = 3.5.

Abdomen slightly narrowed from third visible tergite anteriad and posteriad. Elevated area between two basal lines on first three visible tergites impunctate. Punctation of visible tergites finer and denser than that of elytra. Surface between punctures without microsculpture; setation similar to that on elytra.

Male. Protarsomeres 1-3 slightly dilated and sub-bilobed, each covered with modified pale setae ventrally, protarsomere 4 narrower than preceding ones. Sternite VIII (Fig. 4), sternite IX (Fig. 5), apical portion of median lobe from dorsal view, with rather rounded apex, aedeagus (Figs 1-3).

Female. Protarsomeres 1-3 approximately as dialated as those of male, each covered with modified pale setae ventrally, protarsomere 4 small.

Differential diagnosis. *Philonthus alterius* may be distinguished from *P. pantodon* by longer eyes and paler legs, from *P. quisquiliarius* by longer eyes. It differs from all species of this group by the different shape of the aedeagus.

Distribution. Angola, Ghana, Kenya, Liberia, Mascarene Islands, Republic of South Africa, Senegal, Sudan, Zambia.

Philonthus debiliformis Cameron, 1951 (Figs 6-9)

Philonthus debiliformis Cameron, 1951: 402. Philonthus obscuratus Cameron, 1951: 402 [preoccupied]. Synonymized by Herman 2001:28. Philonthus sosis Tottenham, 1953: 147. Synonymized by Tottenham, 1962: 138, 194.

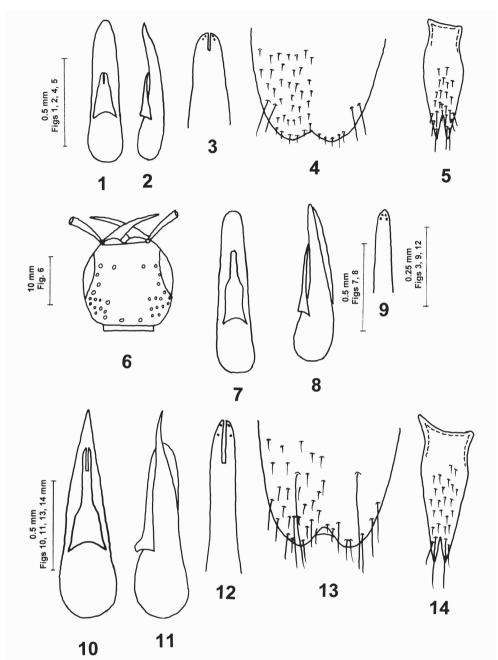
Type locality. Kenya, Van Someren, Magadi.

Type material examined. Holotype (♂): 'Kenya, Van Someren, Magadi, v.42, Pres by Com. Indy. Ent. B.M. 1932-575, // TYPE *Philonthus debiliformis*, Cameron [white oblong printed label, handwritten]', (BMNH).

Material examined. GAMBIA, Basse, 18.xi.1989, 1 spec., M.L. Denon, (NMUK); Outsider Azbuko Nature Reserve, at water works, at light, 18.30 -21.00, 4.xi.1977, Lund Univ. Syst Dept., SWEDEN-GAMBIA-SENEGAL, nov. 1977, 39 spec., Cederholm — Danielsson — Hammarstedt — Hedqvist — Samuelsson, (LHPC, MZLU); SENEGAL: 3 spec., 2.5km., ESE, Zuguinchor in cultivated area, at light, 20.00 — 21.30, Lund. Univ. Syst. Dept. SWEDEN-GAMBIA-SENEGAL, nov. 1977 — Cederholm — Danielsson — Hammarstedt — Hedqvist — Sammuelsson, (LHPC, MZLU); SIERRA LEONE, Makeni, 12°03′W,8°53′N, 27.xi.1993,







Figs 1-14. *P. alterius* Cameron, 1951: 1- aedeagus, ventral view; 2- aedeagus, lateral view; 3- apex of paramere with sensory peg setae, ventral view; 4- apical portion of male sternite VIII, ventral view; 5- male sternite IX, ventral view. *P. debiliformis* Cameron, 1951: 6- head; 7- aedeagus, ventral view; 8- aedeagus, lateral view; 9- apex of paramere with sensory peg setae, ventral view. *P. flavoscutellatus* Bernhauer, 1928: 10- aedeagus, venral view; 11- aedeagus, lateral view; 12- apex of paramere with sensory peg setae, ventral view; 13- apical portion of male sternite VIII, ventral view; 14- male sternite IX, ventral view.



loc., 9, light trap 18-21, Lund University Sierra Leone Expedition 1993, 12 spec., L. Cederholm – R. Danielsson leg., (LHPC, MZLU); SUDAN, Khartoum, 29.viii.1967, 2 spec., Dr. P. Štys leg., (LHPC).

Redescription. Body length 6.8:7.2 mm, length of fore body 3.0:3.2 mm.

Colouration. Body black, clypeus along anterior margin and antennal sockets very narrowly yellow-brown, maxillary and labial palpi dark brown, antennae black, antennomere 1 and base of antennomere 2 yellow-brown, legs brown-yellow, all tarsi conspicuously pale.

Head rounded (Fig. 6), wider than long (ratio 21:17), posterior angles with 1 long black bristle. Eyes distinctly longer than temples (ratio 10:5.5). Between eyes 4 coarse punctures along straight line, distance between medial interocular punctures 4 times as long as distance between medial and lateral interocular puncture. Posterior margin of eyes with several coarse punctures. Temporal area very densely and coarsely punctate. Surface without microsculpture.

Antennae reaching posterior margin of pronotum when reclined. Antennomere 1 much longer than antennomere 11, antennomere 2 shorter than antennomere 3, relative length of antennomeres: 1 = 6.5; 2 = 4; 3 = 4.5; 4-7 = 3; 8-10 = 2.5; 11 = 4.

Pronotum highly convex, hardly longer than wide (ratio 22:21). Parallel-sided, anterior angles almost rectangular, bluntly rounded, posterior angles conspicuously rounded. Each dorsal row with 5 almost equidistant coarse punctures. Each sublateral row with 2 punctures, puncture 1 situated behind level of puncture 3 in dorsal row. Surface without microsculpture.

Scutellum finely and densely punctate, punctures equal in size to eye-facets, separated mostly by one puncture diameter in transverse direction.

Elytra combined as long as wide, parallel-sided. Punctation coarse and dense, punctures slightly larger than eye-facets, separated mostly by one puncture diameter, or conspicuously smaller. Surface without microsculpture; setation greyish.

Legs. Metatibia longer than metatarsus (ratio 18:16). Metatarsomere 1 longer than metatarsomeres 2-3 combined, metatarsomere 5 shorter than metatarsomere 1. Relative length of metatarsomeres: 1 = 4.5; 2-3 = 2; 4 = 1.5; 5 = 4.

Abdomen slightly narrowed from visible tergite III anteriad and posteriad. Elevated area between two basal lines on first three visible tergites impunctate. Punctation of all visible tergites finer and denser than on elytra. Surface without microsculpture; setation similar to that on elytra.

Male. Protarsomeres 1-3 dilated and sub-bilobed, each covered with modified pale setae ventrally, protarsomere 4 narrower than preceding ones. Apical portion of median lobe from dorsal view, with rather rounded pointed apex, aedeagus (Figs 7-9).

Female. Protarsomeres 1-3 less dilated than those of male, each covered with modified pale setae ventrally, protarsomere 4 small.

Differential diagnosis. This species is similar to *P. pantodon* sp. nov., but differs from it by the paler legs, longer eyes and by the different shape of the aedeagus.

Distribution. Kenya, Gambia, Sierra Leone, Senegal, Sudan, Tanzania.







Philonthus flavoscutellatus Bernhauer, 1928

(Figs 10-14)

Philonthus flavoscutellatus Bernhauer, 1928: 110.

Type locality. Congo, [Belg.-Kongo: Mongende].

Type material examined. Holotype (3): 'Democratic Republic of the Congo, [Belb.-Kongo: Mongende], 11.iv.1921, Schouteden, Musée du Congo, Chicago NHMus, M. Bernhauer collection. // Type, *Philonthus flavoscutellatus*, M. Bernhauer [white oblong label, handwritten]', (FMNH).

Redescription. Body length 5.6 mm, length of fore body 3.5 mm.

Colouration. Head black, pronotum brown-red, elytra and abdomen brown, posterior margin of all tergites narrowly paler, maxillary and labial palpi and mandibles yellow-brown, antennae brown, antennaeres 1-2 and base of antennaere 3 brown-yellow, legs yellow-brown, tibiae darker.

Head rounded, conspicuously wider than long (ratio 18:16), eyes much longer than temples (ratio 7.5:5.0), posterior angles markedly rounded, with 2 long black bristles. With 4 coarse punctures between eyes, distance between medial interocular punctures 4 times as long as distance between medial and lateral interocular puncture. Surface with very fine microsculpture consisting of transverse waves.

Antennae exceeding posterior margin of pronotum by the length of antennomeres 10-11 when reclined, all antennomeres longer than wide, relative length of antennomeres: 1 = 7.5; 2 = 4; 3 = 5; 4-7 = 4; 8-10 = 3.5; 11 = 5.

Pronotum slightly longer than wide (ratio 22.5:21), very slightly narrowed anteriad. Anterior pronotal angles and sides with several bristles of unequal length. Each dorsal row with 5 equidistant punctures, each sublateral row with 2 punctures, puncture 1 situated between level of punctures 2 and 3 in dorsal row. Microsculpture similar to that on head.

Scutellum finely and sparsely punctate only in posterior two thirds, punctures as large as eye-facets, separated by distance larger than one puncture diameter in transverse direction. Anterior third impunctate.

Elytra combined wider than long (ratio 29:26) slightly widened posteriad. Punctation dense and coarse, punctures somewhat larger than eye-facets, separated by one puncture diameter in transverse direction. Surface without microsculpture; setation brown-yellow.

Legs. Metatarsus conspicuously longer than metatibia (ratio 20:18.5). Metatarsomere 1 as long as metatarsomere 5, relative length metatarsomeres: 1 = 5; 2 = 3; 3-4 = 2.5; 5 = 5.

Abdomen. First three visible tergites with two basal lines, elevated area between basal lines with microscopic dots. Punctation of visible tergites very fine, diameter of punctures smaller than eye-facets, separated by distance conspicuously larger than one puncture diameter, becoming sparser and irregular towards posterior margin of each tergite. Surface without microsculpture; setation similar to that on elytra.

Male. Protarsomeres 1-3 markedly dilated and sub-bilobed, each covered with modified pale setae ventrally, protarsomere 4 distinctly narrower than preceding ones. Sternite VIII







(Fig. 13), sternite IX (Fig. 14), apical portion of median lobe from dorsal view with sharply pointed apex, aedeagus (Figs 10-12).

Female, Unknown.

Differential diagnosis. *Philonthus flavoscutellatus* may be distinguished from similar *P. mateui* by the longer eyes, paler pronotum and elytra, and by the different shape of the aedeagus.

Distribution. Democratic Republic of the Congo (Herman 2001).

Philonthus lepineyi Scheerpeltz, 1934 (Figs 15-17)

Philonthus lepineyi Scheerpeltz, 1934: 5.

Type locality. Sudan, Nemá.

Type material examined. Holotype $(\cite{})$ (teneral): 'Soudan, Nema de Lepiney, Thery donarit, ex coll. Scheerpeltz // TYPUS *Philonthus lepiney* O. Scheerpeltz [oblong dark red label]', (NHMW).

Redescription. Body length 6.5 mm, length of fore body 4.3 mm.

Colouration. Head black, pronotum reddish brown, elytra yellowish brown, shoulders and scutellum widely darker, abdomen brown, posterior margins of tergites paler, maxillary and labial palpi yellowish brown, antennae brown, antennomeres 1-2 and legs yellowish-brown.

Head (Fig. 15) hardly wider than long (ratio 22:21), hardly narrowed posteriad, posterior angles unclear, with several variably long bristles, eyes approximately as long as temples. With 4 coarse punctures between eyes, distance between medial interocular punctures four times as long as distance between medial and lateral interocular puncture. Surface with very irregular, almost indistinct microsculpture.

Antennae reaching posterior fourth of pronotum when reclined. Antennomeres 1-7 and 11 longer than wide, antennomeres 8-10 as long as wide. Relative length of antennomeres: 1 = 7; 2-3 = 4.5; 4 = 3.5; 5-9 = 3; 10 = 2.5; 11 = 4.

Pronotum slightly longer than wide (ratio 27:25), slightly narrowed anteriad. Anterior pronotal angles and sides with several bristles of unequal length. Each dorsal row with 5 coarse equidistant punctures, each sublateral row with 2 punctures. Surface without microsculpture.

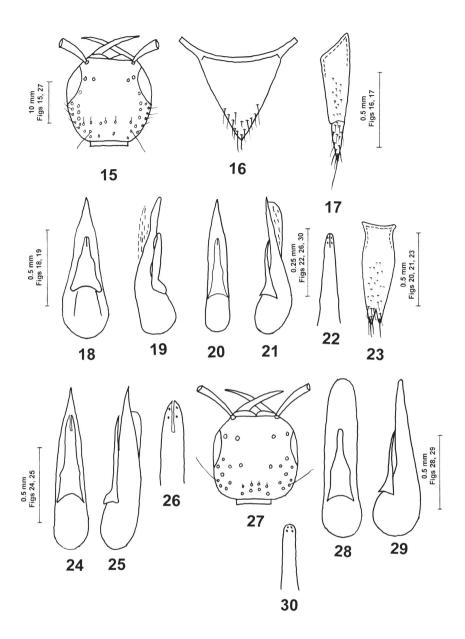
Scutellum coarsely and densely punctate, diameter of punctures as large as eye-facets. Surface without microsculpture.

Elytra approximately as long as wide, slightly widened posteriad. Punctation coarse and sparse, punctures as large as eye-facets, separated by one puncture diameter in transverse direction. Surface without microsculpture; setation yellow-brown.

Legs. Metatarsus as long as metatibia. Metatarsomere 1 conspicuously longer than metatarsomere 5. Relative length of metatarsomeres: 1 = 6; 2 = 3; 3 = 2.5; 4 = 2; 5 = 5.







Figs 15-30. *P. lepineyi* Scheerpeltz, 1934: 15- head; 16- female tergite X, ventral view; 17- gonocoxite of female genital segment. *P. mateui* Levasseur, 1962: 18- aedeagus, ventral view; 19- aedeagus, lateral view, redrawn from Levasseur (1962: 233). *P. osteolaemus* sp. nov.: 20- aedeagus, ventral view; 21- aedeagus lateral view; 22- apex of paramere with sensory peg setae, ventral view; 23- male sternite IX, ventral view. *P. ovithorax* Bernhauer et Schubert, 1914: 24- aedeagus, ventral view; 25- aedeagus, lateral view; 26- apex of paramere with sensory peg setae, ventral view. *P. pantodon* sp. nov.: 27- head; 28- aedeagus, ventral view; 29- aedeagus, lateral view; 30- apex of paramere with sensory peg setae, ventral view.



Abdomen wide, parallel-sided. Elevated area between two basal lines on first three visible tergites punctate. Punctations of visible tergites finer and denser than that on elytra. Surface without microsculpture; setation similar to that on elytra.

Male, Unknown,

Female. Protarsomeres 1-3 moderately dilated, each covered with modified pale setae ventrally, protarsomere 4 small. Tergite X (Fig. 16), gonocoxite of female genital segment (Fig. 17).

Differential diagnosis. *Philonthus lepiney* may be distinguished from similar *P. quisquiliarius* by the shorter antennae and narrower head. Because I know only a single teneral female, it is impossible to say, whether it is a good species or not.

Distribution. Sudan (Herman 2001).

Philonthus mateui Levasseur, 1962 (Figs 18-19)

Philonthus mateui Levasseur, 1962: 233.

Type locality: Mauritania, Rgueibat Temba.

Type material examined. Paratype (♀): 'Mauritania, Trarga Gana, 10.ii.1958, Mateu. // TYPE *Philonthus mateui* n. sp. L. Levasseur det. [white oblong label with red PARATYPE, handwritten], (MNHN).

Redescription. Body length 4.4 mm, length of fore body 2.2 mm.

Colouration. Head and abdomen black, pronotum brown-red, scutellum black-brown, elytra black, suture and posterior margin wide red-yelllow, maxillary, labial palpi and mandibles brown-yellow, antennomeres 1-2 and base of antennomere 3 yellow-brown, remaining antennomeres dark brown, legs brown-yellow.

Head almost quadrate, wider than long (ratio 14.5:13), very slightly narrowed posteriad, posterior angles obtusely rounded. Eyes conspicuously shorter than temples (ratio 5:6.5). With 4 coarse punctures between eyes, distance between medial interocular punctures three times as long as distance between medial and lateral puncture. Temples with several variably large punctures. Surface without microsculpture.

Antennae slightly widened distad, reaching posterior fourth of pronotum when reclined. Relative length of antennomeres: 1 = 4.5; 2 = 3; 3 = 2.5; 4-5 = 2; 6-10 = 1.5; 11 = 3.

Pronotum highly convex, longer than wide (17:15), very slightly narrowed anteriad, posterior angles conspicuously rounded. Each dorsal row with 5 punctures, approximately equidistant. Each sublateral row with 2 punctures, puncture 2 distinctly shifted to the lateral margin. Surface without microsculpture.

Scutellum densely and coarsely punctured. Punctures as large as eye-facets, separated by one and half puncture diameter in transverse direction.

Elytra combined approximately as wide as long, slightly widened posteriad. Punctation coarse and dense, punctures larger than those on scutellum, separated by distance conspicuously







larger than one puncture diameter in transverse direction. Surface between punctures without microsculpture.

Legs. Metatibia longer than metatarsus (ratio 11:9.5). Relative length of metatarsomeres: 1 = 3; 2 = 1.5; 3-4 = 1; 5 = 3.

Abdomen wide, slightly narrowed from visible tergite III anteriad and posteriad. Elevated area between two basal lines on first three visible tergites distinctly punctate. Punctation at base of all visible tergites finer and denser than on elytra, gradually becoming finer and conspicuously sparser towards posterior margin of each tergite. Surface without microsculpture; setation greyish.

Male. Protarsomeres 1-3 dilated and sub-bilobed, each covered with modified pale setae ventrally, protarsomere 4 smaller than preceding ones. Apical portion of median lobe, with sharply pointed apex, in dorsal view, aedeagus (Figs 18-19), original drawings after Levasseur, (1962: 233).

Female. Protarsomeres 1-3 slightly dilated and sub-bilobed, each covered with modified pale setae ventrally, protarsomere 4 slightly narrower than preceding ones.

Differential diagnosis. *Philonthus mateui* may be distinguished from the similar *P. flavoscutellatus* by shorter eyes, darker pronotum and elytra and by the different shape of the aedeagus.

Distribution. Mauritania. (Herman 2001).

Philonthus osteolaemus sp. nov. (Figs 20-23)

Type locality. Republic of South Africa, Northern Prov. Camp David, 5 km S of Ofoolaco.

Type material. Holotype (♂): 'Republic of South Africa, Northern Prov. Camp David, 5km S Ofoolaco, 475 m, 17.-24.2000, leg. S. Murzin // HOLOTYPUS *Philonthus osteolaemus* sp.nov., Hromádka, det. 2008 [red oblong label printed]', (NMPC). Paratype (♀): same data as in holotype [red oblong label printed], (LHPC).

Description. Body length 4.5 mm, length of fore body 2.3 mm.

Colouration. Body except elytra black, elytra black-blue, antennae black, ventral side of antennomere 1 brown-yellow, dorsal side black, base of antennomere 2 and mandibles brown-yellow, legs black.

Head quadrate, slightly wider than long (ratio 14.5:13), behind eyes rather slightly rounded to neck. Eyes shorter than temples (ratio 5:6). With 4 punctures between eyes, distance between medial interocular punctures about three times as large as distance between medial and lateral puncture. Posterior angles with two black bristles. Temporal area with several punctures. Surface without microsculpture, shiny.

Antennae stout, reaching midlength of pronotum when reclined. Antennomeres 1-3 and 11 longer than wide, antennomeres 4-6 as long as wide, antennomeres 7-10 wider than long. Relative length of antennomeres: 1 = 3.5; 2 = 3; 3 = 2; 4-10: = 1.5; 11 = 2.5.





Pronotum highly convex, hardly longer than wide (ratio 17:16), slightly narrowed anteriad. Posterior angles conspicuously rounded. Each dorsal row with 5 coarse equidistant punctures. Each sublateral row with 2 punctures of the same size as punctures in dorsal rows, situated halfway between dorsal row and lateral margin. Surface without microsculpture; shiny.

Scutellum densely and coarsely punctate, punctures smaller than those on elytra, separated by distance smaller than puncture diameter.

Elytra combined hardly longer than wide (ratio 22:21), parallel-sided. Anterior angles with one long black bristle. Punctation coarse and sparse; diameter of punctures conspicuously larger than eye-facets; separated by about one puncture diameter in transverse direction. Setation grey-white.

Legs. Metatibia longer than metatarsus (ratio 12.5:11). Metatarsomere 1 vaguely shorter than metatarsomeres 2-3 combined, metatarsomere 5 shorter than metatarsomeres 2-4 combined. Relative length of metatarsomeres: 1 = 3; 2 = 2; 3 = 1.5; 4 = 1; 5 = 4.

Abdomem wide, parallel-sided. First three visible tergites with two basal lines, elevated area between lines on first visible tergite almost impunctate, coarsely and densely punctate on second and third tergite, punctation of visible tergites finer and denser than on elytra. Setation of same colour as that on elytra.

Male. Protarsomeres 1-3 strongly dilated, sub-bilobed, each covered with modified pale setae ventrally, protarsomere 4 narrower than preceding ones, triangular. Sternite IX (Fig. 23), apical portion of median lobe with sharply pointed apex, dorsal view, aedeagus (Figs 20-22).

Female. Protarsomeres 1-3 much less dilated than in male, protarsomere 4 small, only first three protarsomeres bearing modified pale setae ventrally.

Differential diagnosis. *Philonthus osteolaemus* sp. nov. may be distinguished from the most similar species *P. ovithorax* by the different colour of elytra, darker legs and by thr different shape of the aedeagus.

Distribution. Republic of South Africa.

Etymology. The name of this species, a noun in apposition, is the Latin generic name of the West African Dwarf Crocodile *Osteolaemus tetraspis* Cope, 1861.

Philonthus ovithorax Bernhauer et Schubert, 1914 (Figs 24-26)

Philonthus ovicollis Fauvel, 1905: 179. Secondary hononym of Staphylinus ovicollis Broun 1880 replaced by Bernhauer & Schubert (1914) and made invalid by Herman (2001) (see Note below).
 Philonthus lacustris Bernhauer, 1915: 141 syn. nov.
 Philonthus quisquiliaroides Scheerpeltz, 1974: 152 syn. nov.

Note. *Philonthus ovicollis* Fauvel, 1905 was considered as a junior secondary homonym of *Philonthus (Gabrius) Philonthus ovicollis* (Broun, 1880) at the time when Bernhauer & Schubert (1914) completed the respective part of the Staphylinidae catalogue for the Junk &









Schenkling "Coleopterorum Catalogus". To remove this homonymy, Bernhauer & Schubert (1914) therefore proposed the replacement name *P. ovithorax* Bernhauer & Schubert, 1914. Later, Smetana (1958) transfered *P. ovicollis* Broun, 1880 to the genus *Gabrius* and removed therefore the hononymy of *P. ovicollis* Fauvel, 1905 with *P. ovicollis* (Broun, 1880). Even though the name *P. ovithorax* was never used after its proposal by Bernhauer & Schubert (1914), Herman (2001) used the name as valid considering *P. ovicollis* Fauvel, 1905 as its synonym. This has made the name *P. ovicollis* Fauvel, 1905 invalid according to the Article 59.3 of the International Code of Zoological Nomenclature (ICZN 1999) and *P. ovicollis* Fauvel, 1905 has to be therefore considered as a synonym of *P. ovithorax* Bernhauer & Schubert, 1914.

Type locality. Madagascar, sud: Andrahomana.

Type material examined. Lectotype: 'Madagascar sud: Andrahomana, // *Philonthus ovicollis* Fauvel, coll. Et det., A. Fauvel [red oblong label printed], R.I.Sc.N.B. 17. 479', (MRAT).

Material examined. ETHIOPIA, Lacus Shalo, 2 spec., Chicago NHMus M. Bernhauer collection, (FMNH); BOTSWANA, Okavango-Delta Moremi, Wildlife Reservs, Third Bridge Campsite, 19°14′22"S/23°21′24"E, 10.iii.1993, lux, 1 spec., M. Uhlig leg., (MNUB); Kasane, 1.i.1994, 1 spec., M. Snížek lgt., (LHPC); Island Safari lodge env., MAUN, 2.-15.i.1994, 2 spec., M. Snížek, (LHCP), ETHIOPIA, Sidamo Prov., By hot springsat Noi Kein and Lake Abaya 1350 m, 12.ix.1972, 1 spec., R.O.S. Clarke, (LHCP); REPUBLIC OF SOUTH AFRICA, Transvaal, Barber span, 26.35S-25.35E, 5.ix.1973; 5.ix.1973; E-Y: 91, singled lake show, 1 spec., Endrödy-Younga leg., (FMNH); Natal:Nouze N.P., 27°36′S/32°13′E, 2.-3.ii.°994, lux, 1 spec., M. Uhlig, leg., (MNUB).

Redescription. Body length 4.5-5.1 mm, length of fore body 2.3-2.5mm.

Colouration. Head, elytra and abdomen black, pronotum black-brown, maxillary and labial palpi brown-yellow, antennae black, antennomeres 1-2 and base of antennomere 3 brown-yellow, legs yellow-brown.

Head as long as wide, slightly narrowed behind eyes, eyes flat, conspicuously longer than temples (ratio 10:8). With 4 coarse punctures between eyes, distance between medial interocular punctures three times as long as distance between medial and lateral interocular puncture. Posterior margin of eyes with 3 coarse punctures. Temporal area coarsely punctate. Surface with very fine microsculpture of transverse waves.

Antennae almost reaching posterior margin of pronotum when reclined. Antennomeres 1-6 and 11 longer than wide, antennomeres 7-10 as long as wide. Relative length of antennomeres: 1 = 6; 2-3 = 3.5; 4-6 = 3; 7-10 = 2.5; 11 = 4.

Pronotum slightly longer than wide (ratio 20:18), parallel-sided, sides with several black bristles of unequal length. Each dorsal row with 5 equidistant punctures, each sublateral row with 2 punctures. Surface with very fine microsculpture similar to that on head.

Scutellum coarsely and densely punctate. Punctures separated by one puncture diameter in transverse direction

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Elytra combined longer than wide (rario 25:22), parallel-sided. Punctation coarse and





sparse, diameter of punctures somewhat larger than eye-facets, punctures separated mostly by distance larger than one puncture diameter. Surface without microsculpture; setation greyish.

Legs. Metatibia longer than metatarsus (ratio 14:11). Metatarsomere 5 conspicuously longer than metatarsomere 1. Relative length of metatarsomeres: 1 = 3.5; 2 = 2.5; 3 = 2; 4 = 1.5; 5 = 4.

Abdomen relatively highly convex. First three visible tergites with two basal lines, elevated area between lines with scattered punctures. Punctation of visible tergites finer and denser than on elytra. Setation of the same colour as on elytra.

Male. Protarsomeres 1-3 conspicuously dilated and sub-bilobed, each covered with modified pale setae ventrally, protarsomere 4 distinctly narrower than preceding ones, without modified yellow setae ventrally. Apical portion of median lobe with sharply pointed apex in dorsal view, aedeagus (Figs 24-26).

Female. Protarsomeres 1-3 less dilated than those of male, each covered with modified pale setae ventrally, protarsomere 4 small.

Differential diagnosis. *Philonthus ovithorax* may be distinguished from the similar *P. osteolaemus* by the different colour of the elytra, paler legs and by the different shape of the aedeagus.

Distribution. Madagascar, Botswana, Ethiopia, Republic of South Africa.

Philonthus pantodon sp. nov. (Figs 27-30)

Type locality. Sudan mer., Shambe.

Type material. Holotype (♂): 'SUDAN mer., Shambe, 15.x.1966, Dr. P. Štys leg. //Holotype *Philonthus pantodon* sp. nov. Hromádka det. 2008 [red oblong printed label]', (NMPC).

Description. Body length 7.8 mm, length of fore body 3.7 mm.

Colouration. Body, maxillary, labial palpi and antennae black, base of antennomere 2 yellow-brown, all legs black.

Head (Fig. 27) quadrate, conspicuously wider than long, (ratio 22.5: 21), very vaguely narrowed posteriad. Posterior angles obtusely rounded, with one long black bristle. Eyes flat, as long as temples. With 4 coarse punctures between eyes, distance between medial interocular punctures four times as long as distance between medial and lateral interocular puncture. Temporal area with several variably large punctures. Surface without microsculpture.

Antennae reaching posterior fifth of pronotum when reclined, antennomeres 1-7 and 11 longer than wide, antennomeres 8-10 as long as wide. Relative length of antennomeres: 1 = 8; 2 = 4; 3-4 = 3.5; 5-7 = 3; 8-10 = 2.5; 11 = 4.5.

Pronotum highly convex, as long as wide, slightly narrowed anteriad, posterior angles markedly rounded. Each dorsal row with 5 coarse equidistant punctures, each sublateral







row with 2 fine punctures, puncture 2 conspicuously shifted towards lateral margin. Surface without microsculpture, slightly golden-brown iridescent.

Scutellum very finely and densely punctate, punctures smaller than eye-facets, separated by one or one and half puncture diameters in transverse direction.

Elytra combined wider than long (ratio 36:33), slightly widened posteriad. Punctation fine and dense, punctures as large as eye-facets, separated by one puncture diameter in transverse direction, some punctures slightly contiguous. Surface without microsculpture; setation greyish.

Legs. Metatibia somewhat longer than metatarsus (ratio 19:18). Metatarsomere 1 as long as metatarsomere 5. Relative length of metatarsomeres: 1 = 5; 2 = 2.5; 3 = 2; 4 = 1.5; 5 = 5.

Abdomen parallel-sided, from visible tergite 4 only slightly narrowed towards apex. Elevated area between two basal lines on first three visible tergites densely punctate, basal lines on fourth visible tergite impunctate. Punctation of visible tergites fine and dense, punctures smaller than those on elytra, punctures mostly coalescent. Surface without microsculpture; setation similar to that on elytra.

Male. Protarsomeres 1-3 markedly dilated and sub-bilobed, each covered with modified pale setae ventrally, protarsomere 4 distinctly narrower than preceding ones. Apical portion of median lobe rather rounded pointed apex, in dorsal view, aedeagus (Figs 28-30).

Female, Unknown.

Differential diagnosis. *Philonthus pantodon* sp. nov. may be distinguished from the similar species *P. alterius* and *P. debiliformis* by the shorter eyes and darker legs, it differs from both by the different shape of the aedeagus.

Distribution. Sudan

Etymology. The name of this species, a noun in apposition, is the Latin generic name of the African butterflyfish *Pantodon buchholzi* Peters, 1877.

Philonthus quisquiliarius (Gyllenhal, 1810) (Figs 31-36)

Stahpylinuss quisquiliarius (Gyllenhal, 1810: 335).

Quedius inquinatus Stephens, 1832: 223. Synonymized by G. Waterhouse, 1858: 25.

Philonthus phaeopus Stephens, 1832: 236. Synonymized by G. Waterhouse, 1858: 25.

Staphylinus dimidiatus Lacordaire, 1835: 402. Synonymized by Kraatz, 1857: 607.

Philonthus rubidus Erichson, 1840: 475. Synonymized by Kraatz, 1857: 607.

Philonthus linearis Hochhuth, 1849: 140. Synonymized by Fauvel 1874: 237.

Philonthus sinuatus Wollaston 1867: 239. Synonymized by Fauvel 1902: 110.

Philonthus chalceipennis Fauvel, 1878: 547. Synonymized by Fauvel 1889: 265.

Philonthus stoliczkae Sharp, 1878: 170. Synonymized by Fauvel 1903: 271 with P. quisquiliarius var. inquinatus.

Philonthus brunneipennis Quedenfeldt, 1882: 182. Synonymized by Fauvel 1903: 271 with P. quisquiliarius var. inquinatus.

Philonthus rubrosuturatus Bernhauer, 1902: 166. Synonymized by Bernhauer and Schubert 1914: 353.

Philonthus opacus Gerhardt, 1910: 555. Synonymized by Smetana, 1958: 215.

Philonthus samoensis Bernhauer, 1922: 150. Synonymized by Cameron 1932: 123.







Philonthus opacinus Scheerpeltz, 1933: 1358. Synonymized by Smetana, 1959: 164. Philonthus andalusiacus Coiffait, 1966: 510. Synonymized by Coiffait, 1974: 200. Philonthus misor Tottenham, 1953: 146. Synonymized by Lecoq, 1990: 99 with P. chopardi. Philonthus chopardi Cameron, 1950: 214 syn. nov. Philonthus peregrinoides Scheerpeltz, 1974: 46 syn. nov.

Type locality. Suecia.

Type material. Not studied.

Material examined. BOTSWANA, Toteng 42 mls. SW Maun, 17.iv.1972, at light, 2 spec., (BMNH); R. Thamalakane, 7 mls, NE Maun, 20.iv.1972, Souher.African Exp., B.M. 1972, 1 spec., (BMNH); 2 mls., N. Gweta, 20°11′S,25°15′E, 22.iv.1972, at light, Southern African Expedition, B.M. 1972, 1 spec., (BMNH); 2.-15.i.1994, Island Safari Lodge env., MAUN, 1 spec., M. Snížek lgt., (LHPC); DEMOCRATIC REPUBLIC OF THE CONGO, Elisabethville (á la lumiére) 1957-1958, 4 spec., Ch. Seydel, coll. Mus. Congo, (MRAT); MADAGASCAR, 1049 m, Antsiranana, Antsahampano Montagne d'Ambre, Malaise Trap, 15.-19.xii.2004, 12.53°S 49.17°E, 3 spec., D.C.Lees BMNH (E) 2004-46, (BMNH); MALAWI, Jallenv., 30 km of Zomba, 26.-27.xii.2001, 8 spec., J. Bezděk lgt., (LHPC); NAMIBIA, Rundu Distrikt, Mile 46 Agric. Research Station. 67 km SW Rundu, northern Kalahari woodland, Biota 01.005.2002.7.01.267, 18°18′09.7"S/19°15′11.9"E, light trap, 26.-28.iii.2002, 2 spec., leg.M. Uhlig & V. Richter, (LHPC); REPUBLIC OF SOUTH AFRICA, R. Limpopo, Tvl, 23°00′S, 27°57′E, 25.-26.iv.1972, at light, Southern African Exp., B.M.1972, 1 spec., (BMNH); SENEGAL, Djoudj National Park, 23.3.-27.4.1992, 2 spec., M.L. Denon, (NMUK).

Redescription. Body length 5.5-6.5 mm, length of fore body 2.6-3.5 mm.

Colouration. Black, elytra with weak metallic shine, pronotum slightly golden-brown and abdomen bluish iridescent. Maxillary, labial palpi, mandibles and antennomere 1, base of antennomeres 2-3 and legs yellow-brown, remaining antennomeres black.

Head round quadrate, conspicuously wider than long (ratio 18:16), insignificantly narrowed posteriad, posterior angles rounded, with 2 long and several short black bristles. Eyes as large as temples. With 4 coarse, setiferous punctures between eyes, distance between medial interocular punctures 3 times as long as distance between medial and lateral interocular puncture. Lateral interocular punctures slightly shifted anteriad. Temples area with many variably large punctures. Surface with very fine transverse microsculpture.

Antennae almost reaching posterior margin of pronotum when reclined. Antennomere 1 longer than antennomere 11, antennomere 3 longer than antennomere 2. Relative length of antennomeres: 1 = 6; 2 = 4.5; 3 = 4; 4.7 = 3; 8-10 = 2.5; 11 = 4.

Pronotum as long as wide, slightly narrowed anteriad. Each dorsal row with 5 relatively equidistant punctures, each sublateral row with 2 punctures, puncture 1 situated behind level of puncture 3 of dorsal row, puncture 2 distinctly shifted towards lateral margin. Sides of pronotum with several black bristles of unequal length. Surface at most with very fine microsculpture.

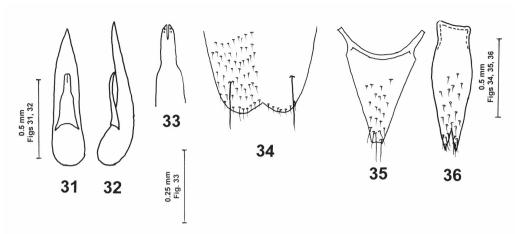
Scutellum densely punctate. Punctures as large as eye-facets, separated by one puncture diameter in transverse direction.

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Figs 31-36. *P. quisquiliarius* Gylenhall, 1810: 31- aedeagus, ventral view; 32- aedeagus, lateral view; 33- apex of paramere with sensory peg setae, ventral view; 34- apical portion of male sternite VIII, ventral view; 35- male sternite IX, ventral view; 36- female tergite X, ventral view.

Elytra combined conspicuously wider than long (ratio 28:26.5), hardly widened posteriad. Punctation relatively fine and dense. Punctures conspicuously larger than eye-facets, separated by one or one and half puncture diameter in transverse direction. Surface without microsculpture; setation dense and yellowish.

Legs. Metatibia as long as metatarsus. Relative length of metatarsomeres: 1 = 5; 2-3 = 2.5; 4 = 2; 5 = 5.

Abdomen slightly narrowed from visible tergite II towards apex. Elevated area between basal lines on first two visible tergites densely punctate, that on third visible tergite with scattered punctures. Punctation of tergites finer than that on elytra, becoming distinctly sparser towards posterior margin of each tergite. Surface without microsculpture; setation similar as those on elytra.

Male. Protarsomeres 1-3 strongly dilated and sub-bilobed, each covered with modified pale setae ventrally. Protarsomere 4 scarcely dilated, distinctly narrowed than preceding ones. Sternite VIII (Fig. 34), sternite IX (Fig. 36), aedeagus (Figs 31-33).

Female. Protarsomeres 1-3 moderately dilated, slightly sub-bilobed, each covered with modified pale setae ventrally, protarsomere 4 scarcely dilated, distinctly narrower than preceding ones. Tergite X (Fig. 35).

Differential diagnosis. *P. quisquiliarius* may be distinguished from the similar *P. alterius* by the shorter eyes and by the sharply pointed apex of the median lobe, from *P. lepineyi* by the longer antennae and wider head.

Distribution. Botswana, Democratic Republic of Congo, Madagascar, Malawi, Namibia, Republic of South Africa, Senegal, Egypt, Algeria, Morocco, Azores, Europe, Russia, Caucasus, Turkey, Syria, Uzbekistan, Nepal, Mongolia, China.



KEY TO SPECIES OF THE PHILONTHUS QUISQUILIARIUS SPECIES GROUP

I di	d not include the species <i>P. lepineyi</i> into this key, because it is known in a single teneral female only
1	Apical portion of median lobe with rounded apex
-	Apical portion of median lobe with sharply pointed apex
2	Smaller species, body length 5.4-5.7 mm, eyes longer than temples (ratio 7:5), legs yellow-brown
	P. alterius Cameron, 1951
-	Larger species, body length 6.8-7.8 mm
3	Eyes as long as temples, legs black
-	Eyes distinctly longer than temples (ratio 10:5.5), legs brown-yellow
4	Pronotum brown-red
-	Pronotum black to black-brown6
5	Elytra uniformly brown, eyes distinctly longer than temples (ratio 7.5:5.0
-	Elytra black, suture and posterior margin widely red-yellow, eyes hardly shorter than temples {ratio 5:6.5).
	P. mateui Levasseur, 1962
6	Smaller species, body length 4.5-5.1 mm
-	Larger species, body body length 5.5-6.5 mm
7	Elytra black-blue, ventral side of antennomere 1 brown-yellow
-	Elytra black, entire antennae uniformly black
8	Black, pronotum slightly golden-brown and abdomen bluish iridescent, elytra with weak mettalic shine
	P. quisquiliarius (Gyllenhal, 1810)

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